

## **EATING FOR PERFORMANCE IN HOCKEY**

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### **Energy Needs in Hockey**

Because of the speed with which it is played and because of the fact that most players will perform at a high pace for a total time of at least 15 minutes during a game and practices are held nearly every day of the week, optimal fuel for exercising muscles must be the first priority. Carbohydrate may be described as the exclusive fuel for the hockey player for the following reasons.

- It is the only fuel that can produce ATP (the gas for the muscle's engine) by anaerobic means. Most shifts during a game are anaerobic.
- It is primary fuel for muscle even when the player is "cruising" and not going at top speed. This means that much of the energy needs of a practice must be met by carbohydrate.
- During playoffs with overtime games or during tournaments with games coming with too little rest, winning teams are often those whose players are least fatigued. This means the players on these teams are likely the fittest and have the most carbohydrate stores to draw upon.

### **The Basic Hockey Diet**

Because hockey is played on the fuel carbohydrate, the food energy in your diet should come mainly from carbohydrates. This means that you must focus on carbohydrate at every meal, not just before and after games and practices. What does this mean?

- Your daily diet should emphasize carbohydrates: breads, cereals, starchy vegetables, and pasta.
- You should make a conscious effort to avoid fats as much as possible. These are found in butter / margarine, salad dressings, fatty meats, fat-rich dairy product, and potato chips. Read labels for prepared foods. These can tell you how much fat is present.
- Your daily diet should consist of at least three meals spread over the day; this includes breakfast. Many athletes eat at least four times throughout the day.
- Your diet should contain lots of fruits and vegetables.
- Your diet should provide good protein foods at least twice a day; fish, chicken, lean meats, low fat dairy products, beans, peas, soy products.
- You will need to fill up with water, electrolyte drinks, and juices after games and practices. (Never get dehydrated.)
- You should eat carbohydrate-rich meals with some protein after practices and games.
- If you practice in the morning, eat before the practice.

## **Think Quality Foods**

### **Breakfast**

Breakfast may be the most important meal of the day, yet too many athletes skip it. Here are some examples of breakfasts that even a finicky eater can handle.

- Two bananas, bran muffin, juice, skim milk
- Juice, double order of whole wheat toast, skim milk
- Two eggs on toast, muffins/bagel, fruit
- Fruit or juices, hot or cold cereal, skim milk, side order of toast/muffins/bagel
- Breakfast buffet: fruit, yogurt, muffins, toast, and cereal
- Pancakes with syrup, fruit, skim milk

### **The Carbohydrate Fat Connection**

Most athletes know that a diet rich in carbohydrates is better for them and will allow them to perform better. However, they usually do not know how to keep the carbohydrate content of the diet up while reducing the fat content because you cannot have a carbohydrate rich diet if you eat too much fat. This fact was recently demonstrated in a study in Sweden using two teams from the Elite Hockey League. The team that followed the high carbohydrate and low fat diet performed much better than expected over a seven month season and scored better in objective tests of hockey performance compared to the control team that carried on as before.

The members of the team acting as a control in this experiment knew that they needed to eat a high carbohydrate diet, but were not very successful at following this advice. In my experience, it seems that athletes can tell me what is a good carbohydrate source, but they are not aware that adding a lot of fat to a carbohydrate rich food actually decreases the percentage of carbohydrate entering the body

### **Did you know that?**

A meat sandwich with Dijon mustard, no butter has less than one half the fat of a Caesar salad?

- The fat content of cheese can vary from 5% to over 40% by weight?
- Whole milk has 75% more calories than skim milk and no more protein, carbohydrate, vitamins, and minerals?
- 8 oz. of Prime Rib can be more than 900 calories, but 8 oz. lean steak only 460 calories?
- 6 oz. of Potato Chips has more than 900 calories?
- Regular salad dressings have up to eight times as many calories as the same light dressing? The difference is due to extra fat
- A slice of bread usually has 80-90 cal. If it is covered in butter, there are about 60-80% more calories?
- Your muscles can store carbohydrate better than if you eat carbohydrate right after a game or a practice?

### **During the Game**

Over the course of a game, hockey players have been known to lose more than 8 pounds, almost all of it water. The human thirst mechanism is slow to respond. By the time you recognize that you are thirsty, your body has already lost a lot of water. On top of this, hard exercise dulls your sensation of thirst.

Therefore:

- Drink constantly throughout the game.
- Eating oranges between periods may be useful both as a source of liquid and a source of carbohydrate.
- Solid foods are probably not necessary during a game

### **Eating Before a Game**

The pre-game meal has become a special ritual for many athletes. In actual fact, what you eat before the game will not make you play better, but if you eat the wrong things, it could make you have a bad game. Games and practices are fuelled mainly by carbohydrate stored in the muscle. Later in the game, sugars ingested during the game will become more useful. Here are some ideas:

- The closer the time to the game, the less you should eat.
- Eating too little is better than eating too much.
- To make it easier to digest, go easy on fat and protein.
- The food you eat will not fuel much of the game. Hockey fuel will already be stored in your muscles.
- Eat foods that agree with you.
- Make sure that you are not thirsty before the game. It is probably a good idea to drink before and after the warm-up.
- A small snack one-hour before the game may be useful for some players; for example some orange juice and some digestive biscuits.

### **After the Game or Practice**

Research has clearly demonstrated that, after exercise, muscles are more sensitive to taking in sugar and the components needed to make muscle protein. Therefore, you should eat some protein and lots of carbohydrate as soon as possible after the practice or game.

- Always have some fluids and carbohydrate. Protein should also be eaten. The sooner you start taking in liquids and energy, the better.
- You need to quickly replenish the fluids lost.
- You need to rebuild up your carbohydrate stores.
- You need protein for your muscles that have worked so hard.

Sample after game/practice eating. These examples are for small snacks, if you have time, eat more.

- Sports Drinks, digestive biscuits, yogurt
- Bagel, orange juice, skim milk
- Sports Drinks, bananas, peanut butter sandwich

### **Gaining Weight**

It is generally recognized that in hockey, as in many other sports, a good, big man is better than a good, little man. Understanding this, many players say that what they want most of all is to be bigger and stronger. This means they want to add more muscle, but not more fat. To do this, they need to "hit the weights". But how to do this, when to do this, and how to integrate this into an overall yearly plan are the big questions. Here are some useful points:

- It is harder to add muscle and strength during a busy hockey season and is best in the off-season.
- Goal is to add muscle, not a layer of fat.
- Some people can gain muscle easily; for others, it is very difficult. Therefore, expectations must be reasonable.
- A combination of resistance exercise, a diet with extra food (extra carbohydrate and protein) and plenty of rest is the best approach.
- Resistance exercises should stress the large muscle groups of the body (legs, hips, back and chest).
- Eat throughout the day, starting when you wake up till when you go to bed. Pinch your stomach and look in the mirror to make sure you are not eating too many calories and are simply adding a ring around your waist. Foods should be rich in carbohydrate and protein.
- In the off-season, a weight-gaining program should not include a lot of running, unless it is sprinting up hills.

### **Travelling Tips**

At probably every level, teams play better at home than they do on the road. The reasons for this are simply the friendly confines of the home arena and the problems with the travel itself, but the fact that many good eating practices go out the window when players travel. The high carbohydrate, low fat diet becomes more like a high fat and low carbohydrate diet. When players feel run down, the best fuel is not there in adequate amounts and performance is not up to par, especially in the third period.

The reason that the foods eaten on the road have too little carbohydrate and too much fat; restaurants, especially fast food restaurants serve foods with too much fat and too little carbohydrate unless the player makes some very tough, but wise choices. What can be done?

#### **Breakfast:**

Skip the bacon and eggs, croissants and hash browns. Go with toasts, bagels, French toast, pancakes, cereals, fruit, and muffins. Fresh fruit, especially bananas and dried fruits, hot chocolate and yogurt are also great ideas.

#### **Lunches:**

Skip the burgers, fries, and fried food. Go for sandwiches with thick breads with lean meat, hold the butter. Salads, baked potatoes, soups and chili are all good ideas.

**Dinners:**

Skip most of the selections at fast food restaurants. Choose pasta, baked potatoes, rice, fish, chicken (without the skin), salads (hold the dressings or go light), pizzas with thick crusts (hold the pepperoni).

**Tournaments**

Many games, packed into a short time period make tournaments a real nutrition challenge. Successful teams will be those who have most gas left at the end. Here are some ideas:

- Immediately after a game, drink liquids containing sugar to make up the fluid loss.
- If the next game is several hours away, solid foods can be eaten, but it should be easy to digest. Examples are fig newton cookies, digestive biscuits, bananas and bananas. Did I mention bananas??
- After the last game of the day, eat a substantial meal containing loads of carbohydrate, some protein and little fat. Thick crust pizza, breads, baked potatoes, rice and especially pasta (go very easy on the meat sauce) are terrific ideas.